



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/665,724

09/20/2000

Joseph E. Cloutier

4-4-1-1

5654

30594

7590

08/08/2005

HARNESS, DICKEY & PIERCE, P.L.C.

P.O. BOX 8910

RESTON, VA 20195

EXAMINER

NGUYEN, TOAN D

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/665,724

Applicant(s)

CLOUTIER ET AL.

Examiner

Toan D Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-10, 14, -15, 19 and 22-24 is/are rejected.
- 7) ☒ Claim(s) 11-13, 16-18, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the Office action of May 17, 2005 is persuasive and therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 7-10, 15, 19 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sen et al. (US 6,330,451) in view of Kuusinen et al. (US 6,757,245).

For claim 7, Sen et al. disclose selectively delaying data communications in a wireless communication system to provide voice communications capacity, comprising:

inserting channel delay in data (figure 2, reference 105) being carried over a communication channel (col. 6 line 66 to col. 7 line 1).

However, Sen et al. do not disclose increase a length of time required for a time out and decrease a number of ramp up times. In an analogous art, Kuusinen et al. disclose increase a length of time required for a time out which in turn decreases a number of ramp up time (col. 3 lines 6-7).

One skilled in the art would have recognized increase a length of time required for a time out and decrease a number of ramp up times, and would have applied Kuusinen et al.'s adjust timer's time out value in Sen et al.'s add delay to the data communication. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Kuusinen et al.'s apparatus and associated method, for communicating packet data in a network including a radio link in Sen et al.'s selectively delaying data communications in a wireless communication system to provide voice communications capacity with the motivation being to prevent of TCP congestion (col. 3 lines 5-8).

For claim 8, Sen et al. disclose wherein said inserting includes inserting channel delay into data (figure 2, reference 105) to be transmitted by a base station (figure 2, reference 106) over said communication channel (col. 6 lines 66-67).

For claim 9, Sen et al. disclose further comprising:
controlling an amount of said channel delay inserted in said data (col. 6 lines 50-55).

For claim 10, Sen et al. disclose wherein said controlling includes:

monitoring acknowledge messages received in response to said data transmitted with said delay (col. 6 lines 62-66), and

determining a desired channel delay for insertion based on a delay observed between transmission of said data and reception of said acknowledge messages (col. 6 lines 51-55 and col. 6 lines 61-66).

For claim 15, Sen et al. disclose selectively delaying data communications in a wireless communication system to provide voice communications capacity, comprising:

means for transmitting and receiving data over a communication channel (figure 2, col. 6 lines 34-37); and

means for inserting channel delay into data (figure 2, reference 105) to be transmitted over said communication channel (col. 6 line 66 to col. 7 line 1).

However, Sen et al. do not disclose increase a length of time required for a time out and decrease a number of ramp up times. In an analogous art, Kuusinen et al. disclose increase a length of time required for a time out which in turn decreases a number of ramp up time (col. 3 lines 6-7).

One skilled in the art would have recognized increase a length of time required for a time out and decrease a number of ramp up times, and would have applied Kuusinen et al.'s adjust timer's time out value in Sen et al.'s add delay to the data communication. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Kuusinen et al.'s apparatus and associated method, for communicating packet data in a network including a radio link in Sen et al.'s selectively delaying data communications in a wireless communication system to

provide voice communications capacity with the motivation being to prevent of TCP congestion (col. 3 lines 5-8).

For claim 19, Sen et al. disclose selectively delaying data communications in a wireless communication system to provide voice communications capacity, comprising:

means for transmitting and receiving data over a communication channel (figure 2, col. 6 lines 34-37); and

means for inserting channel delay (figure 2, reference 105) in said communication channel for data transmission between said mobile communication device and an application (col. 6 line 66 to col. 7 line 1).

However, Sen et al. do not disclose control time out for data transmission and decrease a number of ramp up times. In an analogous art, Kuusinen et al. disclose control time out for data transmission which in turn decreases a number of ramp up time (col. 3 lines 6-7).

One skilled in the art would have recognized control time out for data transmission and decrease a number of ramp up times, and would have applied Kuusinen et al.'s adjust timer's time out value in Sen et al.'s add delay to the data communication. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Kuusinen et al.'s apparatus and associated method, for communicating packet data in a network including a radio link in Sen et al.'s selectively delaying data communications in a wireless communication system to provide voice communications capacity with the motivation being to prevent of TCP congestion (col. 3 lines 5-8).

For claim 22, Sen et al. disclose selectively delaying data communications in a wireless communication system to provide voice communications capacity, comprising:
inserting channel delay (figure 2, reference 105) in data being carried over a communication channel (col. 6 line 66 to col. 7 line 1).

However, Sen et al. do not disclose decreasing a number of ramp up times. In an analogous art, Kuusinen et al. disclose decreasing a number of ramp up time by increasing TCP timer time-out values (col. 3 lines 6-7).

One skilled in the art would have recognized decreasing a number of ramp up times, and would have applied Kuusinen et al.'s adjust timer's time out value in Sen et al.'s add delay to the data communication. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Kuusinen et al.'s apparatus and associated method, for communicating packet data in a network including a radio link in Sen et al.'s selectively delaying data communications in a wireless communication system to provide voice communications capacity with the motivation being to prevent of TCP congestion (col. 3 lines 5-8).

For claim 23, Sen et al. disclose selectively delaying data communications in a wireless communication system to provide voice communications capacity, comprising:
means for transmitting and receiving data over a communication channel (figure 2, col. 6 lines 34-37); and

means for inserting channel delay (figure 2, reference 105) into data to be transmitted over said communication channel (col. 6 line 66 to col. 7 line 1).

However, Sen et al. do not disclose decreasing a number of ramp up times. In an analogous art, Kuusinen et al. disclose decreasing a number of ramp up time by increasing TCP timer time-out values (col. 3 lines 6-7).

One skilled in the art would have recognized decreasing a number of ramp up times, and would have applied Kuusinen et al.'s adjust timer's time out value in Sen et al.'s add delay to the data communication. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Kuusinen et al.'s apparatus and associated method, for communicating packet data in a network including a radio link in Sen et al.'s selectively delaying data communications in a wireless communication system to provide voice communications capacity with the motivation being to prevent of TCP congestion (col. 3 lines 5-8).

For claim 24, Sen et al. disclose selectively delaying data communications in a wireless communication system to provide voice communications capacity, comprising:

means for transmitting and receiving data over a communication channel (figure 2, col. 6 lines 34-37); and

means for inserting channel delay (figure 2, reference 105) in said communication channel between said mobile communication device and an application (col. 6 line 66 to col. 7 line 1).

However, Sen et al. do not disclose to decrease a number of ramp up times. In an analogous art, Kuusinen et al. disclose decreasing a number of ramp up time by increasing TCP timer time-out values (col. 3 lines 6-7).

One skilled in the art would have recognized decreasing a number of ramp up times, and would have applied Kuusinen et al.'s adjust timer's time out value in Sen et al.'s add delay to the data communication. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Kuusinen et al.'s apparatus and associated method, for communicating packet data in a network including a radio link in Sen et al.'s selectively delaying data communications in a wireless communication system to provide voice communications capacity with the motivation being to prevent of TCP congestion (col. 3 lines 5-8).

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sen et al. (US 6,330,451) in view of Kuusinen et al. (US 6,757,245) further in view of Riihinen et al. (US 6,697,331).

For claim 14, Sen et al. in view of Kuusinen et al. do not disclose wherein said inserting includes adding channel delay to said communication channel at a mobile station to control time out for data transmission between said mobile station and an application. In an analogous art, Riihinen et al. disclose wherein said inserting includes adding channel delay to said communication channel at a mobile station to control time out for data transmission between said mobile station (figure 2, reference 20) and an application (figure 2, reference 46) (col. 17 lines 56-61).

One skilled in the art would have recognized wherein said inserting includes adding channel delay to said communication channel at a mobile station to control time out for data transmission between said mobile station and an application, and would have applied Riihinen et al.'s time out in the system of Sen et al. Therefore, it would

have been obvious to one of ordinary skill in the art at the time of the invention, to use Riihinen et al.'s link layer acknowledgement and retransmission for cellular telecommunications in Sen et al.'s selectively delaying data communications in a wireless communication system to provide voice communications capacity with the motivation being advantageous to set the time out values of the poll timer and receive timer EPC to accommodate these transport network delays and processing delays (col. 17 lines 65-67).

Allowable Subject Matter

6. Claims 11-13, 16-18 and 20-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments filed 7/18/05 have been fully considered but they are not persuasive.

The applicant argues with respect to the final Office action on May 17, 2005 that it is improper finality. The examiner agrees. The Office action on May 17, 2005 should be issued as a non-final Office Action. Therefore, the finality of Office action (5/17/05) is withdrawn.

The applicant argues with respect to claims 7-10, 14, 15, 19 and 22-24, that Kuusinen discloses adjusting a length of time required for timeout by selecting a new retransmission time, not by channel delay insertion. The examiner agrees that Kuusinen does teach adjusting a length of time required for timeout by selecting a new

retransmission time. However, the examiner disagrees that Sen in view of Kuusinen do not teach channel delay insertion. Applicant's attention is directed to Sen patent (primary reference) at col. 6 line 66 to col. 7 line 1 (figure 2), where Sen clearly teaches "By adding delay via delay element 105 of the BSC 104 to the data communication, a desired increase in RTD will be established" (channel delay insertion means).

Furthermore, Kuusinen (secondary reference) is incorporated into Sen (the primary reference) where Kuusinen clearly support Sen's channel delay insertion at col. 14 lines 7-42 (figure 3), "The value of a retransmission timer RTO to be used for subsequence data packets is also determined in block 242 by adding the values of T_D received from delay selection block 236 to the value of RTO_{TCP} received from the standard TCP RTO estimation block 237. This new value of RTO is applied to the following N data packets, as indicated by the value of N received from delay selection block 216." Therefore, Sen in view of Kuusinen do teach all limitations recited in the claims.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Sen (primary reference) teaches, "A wireless communication system selectively delays service data

Art Unit: 2665

communications to produce a desire level of voice communication capacity.” (Abstract).

Sen teaches further a Quality of Service (QoS) to facilitate and manage the selective delay of data traffic (col. 11 lines 28-30). Kuusinen (secondary reference) teaches

“Determination is made of the conditions on the radio-link when selecting the optimal size of a transmission window within which transmit packets of data. And,

retransmission time-out values are also selected responsive to the indications of the radio-link conditions.” (Abstract). Kuusinen further teaches at col. 3 lines 4-11,

“According to the invention, this erroneous initiation of TCP timer time-out values in conditions where there is an increased likelihood of retransmission over the radio link, for example in situations where there is degradation in the quality of the radio-link (quality of service means) or a decrease in the bandwidth available for communication over the radio link.” Furthermore, Kuusinen do teach delay selection as the examiner has respond above.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2665

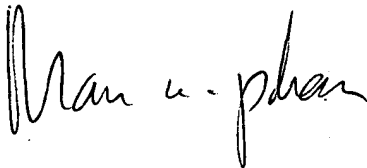
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D. Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN
TN



**MAN U. PHAN
PRIMARY EXAMINER**